



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,467	12/19/2001	Kirk W. Skeba	42390P13006	2034

7590 10/27/2006

John Patrick Ward  
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP  
Seventh Floor  
12400 Wilshire Boulevard  
Los Angeles, CA 90025-1026

EXAMINER

LANIER, BENJAMIN E

ART UNIT PAPER NUMBER

2132

DATE MAILED: 10/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/028,467

Applicant(s)

SKEBA, KIRK W.

Examiner

Benjamin E. Lanier

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4-10 and 16-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-10 and 16-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment filed 10 October 2006 amends claims 4-7, 9-10, 16-19, 21-26, and 28-29. Applicant's amendment has been fully considered and entered.

### *Response to Arguments*

2. Applicant's arguments filed 10 October 2006 have been fully considered but they are not persuasive. Applicant's argument that Watanabe does not disclose "prior to downloading the radio protocol to a baseband module, determining whether the radio protocol meets certification requirements of a third-party certification authority, [and] if the radio protocol meets the certification requirements, downloading the radio protocol," because "instead, Watanabe first downloads the software, then determines at the radio if the software is falsified or not (see page 1, paragraph 8)," is not persuasive.

3. The section (page 1, paragraph 8) referred to by Applicant discusses the feature of Watanabe where the radio confirms that the downloaded software has not been altered or falsified (see further detail on page 6, paragraph 60). Paragraph 60 shows that once the radio receives the downloaded software, the control unit calculates a cyclic redundancy check (CRC) code for software, and compares the computed CRC with a CRC included with the software to determine if the software has been altered. This is not the certification procedure relied upon by the Examiner to meet the claim limitation. Careful study of paragraph 8 (from page 1), paragraph 56 (from page 5), and paragraph 61 (from page 6), shows that an agency approves the software **to be distributed**. What this shows is that the certification by a third-party certification authority, as claimed by Applicant, occurs by the agency in Watanabe prior to the software being

Art Unit: 2132

distributed and hence downloaded by the radio. The procedure pointed to by Applicant, is a procedure performed by the radio that confirms the downloaded software was not altered from the distribution point, which would be considered an additional measure of security.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 4, 5, 7, 16, 17, 19, 23, 24, 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Watanabe, U.S. Publication 2002/0144134. Referring to claim 4, Watanabe discloses a radio system wherein software to update the radio protocol is downloaded to the radio device ([0007]-[0009]), which meets the limitation of identifying a radio protocol, receiving the radio protocol. Specification changes to radio protocols needs to be authorized by a third party authority such as the FCC ([0002]-[0003] & [0006]) and that the software that implements these changes within the radio system is approved before being distributed ([0008]). The software is distributed from a server ([0056]), which meets the limitation of a vendor. The software is approved by an agency before being stored at the server and distributed to various radios ([0056]), which meets the limitation of prior to downloading the protocol by a vendor, determining whether the protocol meets certification requirements of a third party certification authority. When received by the distribution server, the software contains approval by the predetermined agency ([0056]), which meets the limitation of providing guarantees regarding the

certification requirements to a relevant authority. The radio receives the downloaded software and stores the software when installed ([0010] & [0063]), which meets the limitation of if the protocol meets the certification requirements, downloading the radio protocol at a non-volatile memory device coupled to the baseband module. Applicant defines the radio protocols as a specific set of technical parameters including operating frequencies, power output, and types of radio frequency emissions. Watanabe discloses that the radio stores multiple software modules that define the transmissions specifications (Figure 2, elements 51 & 52). These modules define transmission power, frequency, and frequency resolution ([0040]), which meets the limitation of wherein the baseband module is to operate under the radio protocol.

Referring to claim 5, Watanabe discloses that the software is encrypted with information for detecting falsification ([0020]), which meets the limitation of determining if the radio protocol meets the certification requirements comprises authenticating the radio protocol using a cryptographic key stored at the baseband module.

Referring to claim 7, Watanabe discloses that the software is used to reconfigure the radio devices ([0012]). The radio receives the downloaded software and stores the software when installed ([0010] & [0063]), which meets the limitation of the downloading of the radio protocol comprises writing the radio protocol to the non-volatile memory device via a boot loader program.

Referring to claim 16, Watanabe discloses a radio system wherein software to update the radio protocol is downloaded to the radio device ([0007]-[0009]), which meets the limitation of a receiver to receive and identify a radio protocol. Specification changes to radio protocols needs to be authorized by a third party authority such as the FCC ([0002]-[0003] & [0006]) and that the

Art Unit: 2132

software that implements these changes within the radio system is approved before being distributed ([0008]). The software is distributed from a server ([0056]), which meets the limitation of a vendor. The software is approved by an agency before being stored at the server and distributed to various radios ([0056]), which meets the limitation of a mechanism to: prior to downloading the protocol by a vendor, determining whether the radio protocol meet certification requirements of a third party certification authority. When received by the distribution server, the software contains approval by the predetermined agency ([0056]), which meets the limitation of providing guarantees regarding the certification requirements to a relevant authority. The radio receives the downloaded software and stores the software when installed ([0010] & [0063]), which meets the limitation of a non-volatile memory device coupled to the baseband module to accept a download of and store the ratio protocol, if the protocol meets the certification requirements, wherein the baseband module is to operate under the radio protocol.

Referring to claim 17, Watanabe discloses that the software is encrypted with information for detecting falsification ([0020]), which meets the limitation of determining of the radio protocol meets the certification requirements comprises authenticating the radio protocol using a first cryptographic key stored at the baseband module.

Referring to claim 19, Watanabe discloses that the software is used to reconfigure the radio devices ([0012]). The radio receives the downloaded software and stores the software when installed ([0010] & [0063]), which meets the limitation of the downloading of the radio protocol comprises writing the radio protocol to the non-volatile memory device via a boot loader program.

Referring to claim 23, Watanabe discloses a radio system wherein software to update the radio protocol is downloaded to the radio device ([0007]-[0009]), which meets the limitation of identifying a radio protocol, receiving the radio protocol. Specification changes to radio protocols needs to be authorized by a third party authority such as the FCC ([0002]-[0003] & [0006]) and that the software that implements these changes within the radio system is approved before being distributed ([0008]). The software is distributed from a server ([0056]), which meets the limitation of a vendor. The software is approved by an agency before being stored at the server and distributed to various radios ([0056]), which meets the limitation of prior to downloading the radio protocol by a vendor, determining whether the radio protocol meets certification requirements of a third party certification authority. When received by the distribution server, the software contains approval by the predetermined agency ([0056]), which meets the limitation of providing guarantees regarding the certification requirements to a relevant authority. The radio receives the downloaded software and stores the software when installed ([0010] & [0063]), which meets the limitation of if the radio protocol meets the certification requirements, downloading the radio protocol at a non-volatile memory device coupled to the baseband module. Applicant defines the radio protocols as a specific set of technical parameters including operating frequencies, power output, and types of radio frequency emissions. Watanabe discloses that the radio stores multiple software modules that define the transmissions specifications (Figure 2, elements 51 & 52). These modules define transmission power, frequency, and frequency resolution ([0040]), which meets the limitation of wherein the baseband module is to operate under both the radio protocol.

Referring to claim 24, Watanabe discloses that the software is encrypted with information for detecting falsification ([0020]), which meets the limitation of determining if the radio protocol meets the certification requirements comprises authenticating the radio protocol using a first cryptographic key stored at the baseband module.

Referring to claim 26, Watanabe discloses that the software is used to reconfigure the radio devices ([0012]). The radio receives the downloaded software and stores the software when installed ([0010] & [0063]), which meets the limitation of the downloading of the radio protocol comprises writing the radio protocol to the non-volatile memory device via a boot loader program.

### *Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 6, 18, 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe, U.S. Publication 2002/0144134, in view of Schneier. Referring to claims 6, 18, 25, Watanabe



Art Unit: 2132

discloses that the software is encrypted with information for detecting falsification ([0020]).

Watanabe does not disclose that the software is encrypted using public key encryption techniques. It would have been obvious to one of ordinary skill in the art at the time the invention was made to encrypt the software of Watanabe using public key encryption techniques because it allows for easier key management by allowing for a network of users to communicate without prior arrangements (Schneier, Pages 31-32).

9. Claims 8, 9, 20, 21, 27, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe, U.S. Publication 2002/0144134, in view of Mayer, U.S. Patent No. 4,442,486.

Referring to claims 8, 20, 27, Watanabe discloses a radio system wherein software to update the radio protocol is downloaded to the radio device ([0007]-[0009]), which meets the limitation of receiving a radio protocol at a baseband module. A test is conducted to verify the software ([0009]), which meets the limitation of determining whether said radio protocol has been certified by a certification authority. After verification the software is installed ([0010]), which meets the limitation of storing said radio protocol in a non-volatile memory device in said baseband module, if said radio protocol has been certified by said certification authority.

Watanabe does not disclose that this test is based on the manufacturer of the radio devices.

Mayer discloses a protected programmable apparatus wherein a device, manufactured by a specific manufacturer, is prevented from operating software that is not approved by the manufacturer (Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made for the verification step of Watanabe to include manufacturer information in order to enable the device's manufacturer to control what software is running on their devices as taught in Mayer (Col. 1, lines 23-55).

Referring to claims 9, 21, 28, Watanabe discloses that the software is encrypted with information for detecting falsification ([0020]), which meets the limitation of authenticating the program using a second cryptographic key stored at the baseband module. Watanabe does not disclose that this test is based on the manufacturer of the radio devices. Mayer discloses a protected programmable apparatus wherein a device, manufactured by a specific manufacturer, is prevented from operating software that is not approved by the manufacturer (Abstract), which meets the limitation of determining whether the boot loader program is approved by the manufacturer. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the verification step of Watanabe to include manufacturer information in order to enable the device's manufacturer to control what software is running on their devices as taught in Mayer (Col. 1, lines 23-55).

10. Claims 10, 22, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe, U.S. Publication 2002/0144134, in view of Mayer, U.S. Patent No. 4,442,486 as applied to claims 1, 7, 8, 9, 16, 19, 20, 21, 23, 26, 27, 28 above, and further in view of Schneier. Referring to claims 10, 22, 29, Watanabe discloses that the software is encrypted with information for detecting falsification ([0020]). Mayer discloses a protected programmable apparatus wherein a device, manufactured by a specific manufacturer, is prevented from operating software that is not approved by the manufacturer (Abstract). Watanabe does not disclose that the software is encrypted using public key encryption techniques. It would have been obvious to one of ordinary skill in the art at the time the invention was made to encrypt the software of Watanabe using public key encryption techniques because it allows for easier key

Art Unit: 2132

management by allowing for a network of users to communicate without prior arrangements (Schneier, Pages 31-32).

***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin E. Lanier whose telephone number is 571-272-3805. The examiner can normally be reached on M-Th 7:30am-5:00pm, F 7:30am-4pm.

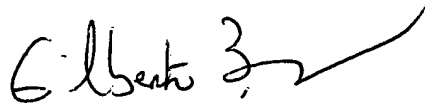
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2132

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Benjamin E. Lanier



**GILBERTO BARRON JR**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**